REMARKS

The enclosed is responsive to the Examiner's Final Office Action mailed on July 24, 2009 and is being filed pursuant to a Request for Continued Examination (RCE) as provided under 37 CFR 1.114. At the time the Examiner mailed the Final Office Action claims 89-104 were pending. By way of the present response the Applicants have: 1) amended claims 94, 100, and 101; 2) added no new claims; and 3) canceled no claims. As such, claims 89-104 are now pending. The Applicants respectfully request reconsideration of the present application and the allowance of all claims now represented.

Claim Objections

The Examiner objected to claims 94 and 100. While Applicants disagree with these objections, Applicants have made the non-narrowing amendments suggested by the Office Action.

Claim Rejections

35 U.S.C. 103(a) Rejections

The Examiner rejected claim 89 under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,740,357 (hereinafter "Gardiner") in view of U.S. Patent 5,781,750 (hereinafter "Blomgren").

With respect to claim 89, the combination does not describe:

> A processor comprising:
> > first logic to detect an error;
> > second logic to attempt to correct a detected error;
> and
> > a first interface to a first memory that stores a set of procedures to access the processor and at least a first software error handling routine to be invoked by the processor via the first interface when the second logic cannot correct the detected error.

First, Applicants would like to note that the rejection set forth by the Office Action does not consider all of the limitations of the claim as required by MPEP 2144.03 ("All words in a claim must be considered in judging the patentability of that claim against the prior art."). Specifically, the Office Action did not consider the limitation of "second logic to attempt to correct a detected error." This is the second time that the Office has failed to consider this limitation. The current Office Action refers back to the previous Office Action which did not consider the second limitation. As such, the Office has never provided a complete rejection of the claim.

Second, the claim requires "a processor comprising..." While Gardiner describes a "service element" which may be a "CPU," Gardiner does not describe what the CPU comprises. The Office Action's rejection cites an error detector and error handler as allegedly meeting some of the claim limitations, but these are not a part of Gardiner's CPU. In its "Response to Arguments" section, the Office Action states that

> by indicating that that CPU (if it is so interpreted to be a CPU) comprises the elements of the described service element, which contains elements of fault/error handling/detecting hierarchy, as illustrated in, for example figure 2. In figure 2, Applicant will note that element 14 is marked as the service element, and that that element includes handlers and a detector, and further, that the element communicates with other such elements both higher and lower.

Applicants respectfully submit that this reasoning is fundamentally flawed as the service element 14 has no such elements. Applicants regret that the last response did not include the following marked version of Figure 2, which may have helped clarify this fact. In the below figure, Applicants have placed two dashed boxes which show the delineation between the "fault management element 16" on the left and the "service element 14" on the right. It is unfortunate that this figure is not very clear and Applicants hope that the annotation more clearly shows the differences. Additionally, Gardiner explicitly carves out these elements from the service element 14 ("The fault management element 16 comprises five components – error detector 30, error handler 40, fault handler 50, tester 60, and control 70.") Moreover, col.3 ll. 61-67 clearly have the fault management element 16 as being a part of a

management agent 17 which is describes a being separate from the service element 14. Thus, the service element 14 of Gardiner, which may be a CPU, clearly does not have any of the elements that the Office Action relied on for its rejection.
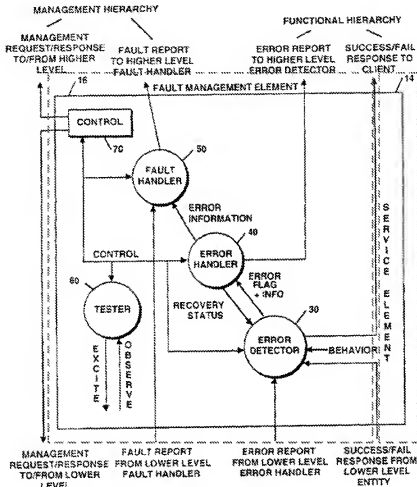

Figure 2

Third, the combination does not describe "<u>a first interface to a first memory that stores</u> a set of procedures to access the processor and <u>at least a first software error handling routine to be invoked by the processor via the first interface when the second logic cannot correct the detected error.</u>" The Office Action cites the combination of Gardiner and Blomgren as describing this limitation. Specifically, the Office Action cites col. 6, line 44 of Gardiner as describing the interface to a memory. This section describes that "[i]f recovery is not successful [at the error handler 40], a fail response and error report (if applicable) is sent to the next higher

level." As shown above, the fail response and error report are sent to the "fault handler 50." However, there is nothing in Gardiner or Blomgren to suggest that there is the claimed interface to memory wherein the memory stores a set of procedures to access the processor (Blomgren's describes emulation which is not a set of procedures to access a processor) or a software error handling routine.

Finally, Applicants note that the "fault management element 16" does not describe the claimed processor as it would not have the required interface or software routine to be invoked by the processor.

For at least these reasons, the combination does not describe what Applicants are claiming. Claims 90-92 are dependent on claim 89 and are allowable for at least the same rationale.

The Office Action rejected claims 90-92 under 35 U.S.C. 103(a) as being unpatentable over Gardiner and Blomgren as applied to claim 89 above, and further in view of U.S. Patent 5,594,905 (hereinafter "Mital"). Claims 90-92 are dependent on claim 89 and are allowable for at least the same rationale
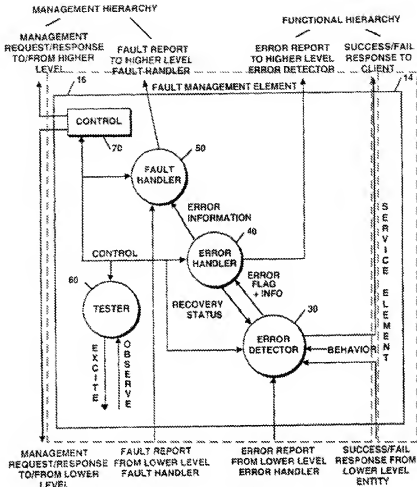
The Office Action rejected claims 93 and 94 under 35 U.S.C. 103(a) as being unpatentable over Gardiner in view of Blomgren and Official Notice.

With respect to claim 93, the combination does not describe:

> A system comprising:
>> a processor;
>> a first memory coupled to the processor, the first memory to store at least a first firmware error handling routine to be invoked by the processor to attempt to correct a detected error when the processor cannot correct the detected error; and
>> a display coupled to the processor.

The combination does not describe "a first memory coupled to the processor, the first memory to store at least a first firmware error handling routine to be invoked by the processor to attempt to correct a detected error when the processor cannot correct the detected error." The Office Action cites the combination of Gardiner and Blomgren as describing this limitation. However, neither Gardiner nor Blomgren,

alone or combination, describe this limitation. Specifically, neither Gardiner nor Blomgren describe a processor attempting to correct a detected error. In Gardiner an external "error detector 30 monitors the behavior of the service element 14 [CPU] by comparing expected behavior with actual observed behavior." (Gardiner, col.4 ll.33-35.) There is nothing in Gardiner that even suggests that the service element attempts to correct an error. The Office Action states that "Firstly, it is not clear where Applicant has determined that the service element's own detector is 'external', but seeing as Applicant has placed it outside the quotes, Examiner takes this as admission that this is an admission that this is an insertion on Applicant's part." Applicants do agree that "external" was added. However, it is abundantly clear the service element does not include anything that corrects or attempts to correct an error. Applicants again look to Figure 2 and the plain text of Gardiner which is more than clear that the service element does not include an error detector, error handler, or fault handler.

MANAGEMENT HIERARCHY   FUNCTIONAL HIERARCHY

MANAGEMENT   FAULT REPORT   ERROR REPORT   SUCCESS/FAIL
REQUEST/RESPONSE TO HIGHER LEVEL   TO HIGHER LEVEL RESPONSE TO
TO/FROM HIGHER   FAULT HANDLER   ERROR DETECTOR CLIENT
LEVEL

MANAGEMENT   FAULT REPORT   ERROR REPORT   SUCCESS/FAIL
REQUEST/RESPONSE FROM LOWER LEVEL FROM LOWER LEVEL RESPONSE FROM
TO/FROM LOWER   FAULT HANDLER   ERROR HANDLER   LOWER LEVEL
LEVEL   ENTITY

Figure 2

So, the service element 14 of Gardiner does not do anything that the Office Action suggests. The citations to col. 6, which the Office Action emphasizes, describe actions taken by the "fault management element 16." Blomgren also does not describe this.

For at least these reasons, the combination does not describe what Applicants are claiming. Claims 94-100 are dependent on claim 93 and are allowable for at least the same rationale.

The Office Action rejected claims 95, 97 and 98 under 35 U.S.C. 103(a) as being unpatentable over Gardiner and Blomgren and Official Notice as applied to

claims 93 and 94 above, and further in view of Mital. Claims 95, 97, and 98 are dependent on claim 93 and are allowable for at least the same rationale.

The Office Action rejected claim 96 under 35 U.S.C. 103(a) as being unpatentable over Gardiner and Blomgren and Official Notice as applied to claim 94 above, and further in view of U.S. Patent 5,787,095 (hereinafter "Myers"). Claim 96 is dependent on claim 93 and is allowable for at least the same rationale.

The Office Action rejected claims 99 and 100 under 35 U.S.C. 103(a) as being unpatentable over Gardiner, Blomgren, Official Notice, and Mital as applied to claim 99 above, and further in view of Official Notice. Claims 95, 97, and 98 are dependent on claim 93 and are allowable for at least the same rationale.

The Office Action rejected claims 101 and 102 under 35 U.S.C. 103(a) as being unpatentable over Gardiner, Blomgren, and Mital. With respect to claim 101, the combination does not describe:

> A system comprising:
> a non-volatile memory to store firmware including a processor abstraction layer (PAL) and a system abstraction layer (SAL), wherein the PAL provides an interface to access the processor across different processor implementations and a first error handling routine and the SAL isolates an operating system from implementation differences in the system and provides a second error handling routine to be invoked if the first error handling routine cannot correct a detected error; and
> a processor coupled to the non-volatile memory, the processor to execute the first and second error handling routines to attempt to correct an error.

First, the combination does not describe "a non-volatile memory to store firmware including a processor abstraction layer (PAL) and a system abstraction layer (SAL), wherein the PAL provides an interface to access the processor across different processor implementations and a first error handling routine and the SAL

isolates an operating system from implementation differences in the system and provides a second error handling routine." There has been no showing in the rejection of a non-volatile memory. Moreover, the Office Action's assertion that Blomberg's emulation is PAL and therefore "provides an interface to access the processor across different processor implementations and a first error handling routine" is unfounded. Blomberg provides no such error handling routine. Moreover, Gardiner, while having an error detector, has been interpreted by the Office as not being software. Thus, the combination of the two would not describe PAL.

Additionally, Mital describes HAL which provides an interface between low level system software of a CPU and hardware dependent software that runs on the hardware. However, Mital does not describe isolating an OS from implementation differences and does not provide a second error handling routine. Moreover, the combination of Gardiner, Blomberg, and Mital would not describe the PAL and SAL.

Second, the combination does not describe "a processor coupled to the non-volatile memory, the processor to execute the first and second error handling routines to attempt to correct an error." Nothing has been cited in the Office Action as being such a processor.

For at least these reasons, the combination does not describe what Applicants are claiming. Claims 102-104 are dependent on claim 101 and are allowable for at least the same rationale.

The Office Action rejected claims 103 and 104 under 35 U.S.C. 103(a) as being unpatentable over Gardiner, Blomgren, and Mital as applied to claim 102 above, and further in view of Myers. Claims 103 and 104 are dependent on claim 101 and are allowable for at least the same rationale.

In light of the comments above, the Applicants respectfully request the allowance of all claims.

<u>CONCLUSION</u>

Applicant respectfully submits that all rejections have been overcome and that all pending claims are in condition for allowance.

If there are any additional charges, please charge them to our Deposit Account Number 02-2666. If a telephone conference would facilitate the prosecution of this application, the Examiner is invited to contact David F. Nicholson at (408) 720-8300.

Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP

Date: <u>Oct. 24, 2009</u>   <u>/David F. Nicholson/</u>
David F. Nicholson
Reg. No.: 62,888

1279 Oakmead Parkway
Sunnyvale, CA 94085
(408) 720-8300